

## II. CLAIM AMENDMENTS

1. (Currently Amended) A method of using mobility agents in a telecommunications system, which telecommunications system comprises at least one mobile node supporting the mobile IP and several network elements, of which network elements at least one comprises one or more mobility agents configured to transmit advertising messages to mobile nodes, the method comprising:

collecting by a mobility agent information on attributes of one or more network elements in the system from one or more network elements in the system,

transmitting said information on the attributes ~~of one or more foreign agents~~ —in advertising messages from ~~the~~ the mobility agents to at least one mobile node, ~~said information comprising at least one of the following foreign agent attributes: current delay of a connection offered by the foreign agent, average delay of the connection offered by the foreign agent, jitter of the connection offered by the foreign agent, number of users served by the foreign agent, throughput of the foreign agent, load of the foreign agent, proportional load of the foreign agent compared to the other foreign agents in the system, and~~

using said information in the mobile node in the selection of a serving ~~foreign agent~~ network element.

2. (Previously Presented) A method according to claim 1, wherein:

said information is transmitted in advertising messages including care-of addresses of the mobility agents periodically, at the request of a mobile node, or periodically and at the request of a mobile node.

3-4. (Cancelled)

5. (Currently Amended) A method according to claim 1, wherein the mobile node is wireless and the telecommunications system is wireless and comprises access points which offer a wireless connection to at least one mobile node, said information ~~in advertising messages further comprising~~ at least one of the following:

loads of different access points,

information on the least loaded access point,

information on the recommended access point, and

other quality of service parameters of the access points.

6. (Currently Amended) A method according to claim 5, wherein:

the attributes of different access points are compared in the mobile node on the basis of said information,

the access point that on the basis of its attributes and any other criteria, ~~can~~ offer a telecommunications connection to the mobile node is selected, and

a connection is established between the selected access point and the mobile node.

7. (Previously Presented) A method of utilizing advertising messages in a telecommunications system, which telecommunications system comprises at least one mobile node and at least one router, the router being configured to transmit advertising messages to mobile nodes, the method comprising:

collecting by at least one router information on attributes of one or more network elements in the system from one or more network elements in the system,

transmitting advertising messages from at least one router to at least one mobile node, the messages including said information on the attributes of one or more network elements~~routers, said information comprising at least one of the following router attributes: current delay of a connection offered by the router, average delay of the connection, jitter of the connection, number of users served, throughput, load, proportional load compared to the other routers in the system, and~~

using said information in the mobile node in selection of a serving network element~~router~~.

8. (Cancelled)

9. (Currently Amended) A method according to claim 7, wherein the mobile node is wireless and the telecommunications system is wireless and comprises access points which offer a wireless connection to at least one mobile node, said information in ~~advertising messages further comprising~~ at least one of the following:

loads of different access points,

information on the least loaded access point,

information on the recommended access point, and

other quality of service parameters of the access points.

10. (Currently Amended) A method according to claim 9, wherein

the attributes of different access points are compared in the mobile node on the basis of said information,

the access point that on the basis of its attributes and any other criteria, ~~can~~ offer a telecommunications connection to the mobile node is selected, and

a connection between the selected access point and the mobile node is established.

11. (Currently Amended) A network element of a telecommunications system, the network element comprising:

~~an IP mobility agent functionality configured to transmit advertising messages to mobile nodes in the system,~~

~~an IP mobility agent configured to means for collecting receive information on the attributes of one or more other network elements foreign agents in the telecommunications system, said information comprising at least one of the following foreign agent attributes: current delay of a connection offered by the foreign agent, average delay of the connection offered by the foreign agent, jitter of the connection offered by the foreign agent, number of users served by the foreign agent, throughput of the foreign agent, load of the foreign agent, proportional load of the foreign agent compared to the other foreign agents in the system, and wherein~~

~~the IP mobility agent is further configured to means for transmitting the information of one or more other network elements in advertising messages to at least one mobile node.~~

12. (Previously Presented) A network element according to claim 11, wherein the information in advertising messages further

comprises attributes of one or more access points of the telecommunications system.

13. (Currently Amended) A router configured to transmit advertising messages to mobile nodes, the router comprising:

means for collecting information on the attributes of one or more other network elements ~~outers~~ of the telecommunications system, ~~said information comprising at least one of the following router attributes: current delay of a connection offered by the router, average delay of the connection, jitter of the connection, number of users served, throughput, load, proportional load compared to the other routers in the system, and~~

means for transmitting the information of one or more other network elements in advertising messages to at least one mobile node.

14. (Currently Amended) A router according to claim 13, wherein the information in advertising messages ~~further~~ comprises attributes one or more access points of the telecommunications system.

15. (Currently Amended) A mobile node supporting the mobile IP for a telecommunications system, which telecommunications system comprises several network elements, of which at least one comprises one or more mobility agents, said mobile node comprising:

reception means for receiving attribute information on one or more network elements ~~foreign agents~~ from one or more mobility agents, said information being collected by the one or more mobility agents from one or more other network elements ~~said information comprising at least one of the following foreign~~

~~agent attributes: current delay of a connection offered by the foreign agent, average delay of the connection offered by the foreign agent, jitter of the connection offered by the foreign agent, number of users served by the foreign agent, throughput of the foreign agent, load of the foreign agent, proportional load of the foreign agent compared to the other foreign agents in the system, and~~

processing means for selecting a serving ~~foreign agent~~network element on the basis of said information.

16. (Previously Presented) A mobile node according to claim 15, wherein:

the processing means are configured to compare attributes of the foreign agents of the basis of said information,

the processing means are configured to select a foreign agent that on the basis of its attributes can take care of data transmission of the mobile node, and

the processing means are configured to transmit a registration request to the selected foreign agent.

17. (Currently Amended) A mobile node according to claim 15, wherein:

said information in advertising messages ~~further~~comprise attributes of the access points of the telecommunications system,

the processing means are configured to compare the attributes of the access points on the basis of said information received from the mobility agents,

the processing means are configured to select the access point that on the basis of its attributes and any other criteria, ~~can~~ offer a telecommunication connection to the mobile node, and

the processing means are configured to establish a connection between the selected access point and the mobile node.

18. (Cancelled)

19. (Currently Amended) A mobile node for a telecommunications system, which telecommunications system comprises one or more routers configured to transmit advertising messages, said mobile node comprising:

reception means for receiving attribute information on one or more routers from one or more routers, ~~said information comprising at least one of the following router attributes: current delay of a connection offered by the router, average delay of the connection, jitter of the connection, number of users served, throughput, load, proportional load compared to the other routers in the system, said information being collected by the one or more routers from one or more other network elements,~~  
and

processing means for selecting a serving ~~router~~ network element on the basis of said information.

20. (Currently Amended) A mobile node according to claim 19, wherein said information in advertising messages ~~further~~ comprises attributes of the access points of the telecommunications system,

the processing means are configured to compare the attributes of the access points on the basis of said information,

the processing means are configured to select an access point that on the basis of its attributes and any other criteria, ~~such as radio channel measurement,~~ can offer a telecommunication connection to the mobile node, and

the processing means are configured to establish a connection between the selected access point and the mobile node.

21. (Previously Presented) A method according to claim 6, wherein said other criteria comprises radio channel measurements.

22. (Previously Presented) A method according to claim 10, wherein said other criteria comprise radio channel measurements.

23. (Previously Presented) A mobile node according to claim 17, wherein said other criteria comprise radio channel measurements.

24. (New) A mobile node according to claim 20, wherein said other criteria comprises radio channel measurements.

25. (New) A network element according to claim 11, wherein the network element is configured to establish a connection to the one or more other network elements and the IP mobility agent is configured to request attribute information from the one or more network elements.

26. (New) A router according to claim 13, wherein the router is configured to establish a connection to the one or more other network elements and request attribute information from the one or more network elements.

27. (New) A mobile node according to claim 15, wherein

said information comprises at least one of the following foreign agent attributes:



current delay of the connection offered by the foreign agent,  
average delay of the connection offered by the foreign agent,  
jitter of the connection offered by the foreign agent,  
number of users served by the foreign agent, and  
throughput of the foreign agent.

28. (New) A method according to claim 1, wherein:

attributes of different foreign agents are compared in the mobile node on the basis of said information received from the foreign agents,

the foreign agent that on the basis of its attributes can take care of data transmission of the mobile node is selected, and

a registration request is transmitted to the selected foreign agent.

29. (New) A method according to claim 27, wherein

said information comprises at least one of the following foreign agent attributes:

current delay of the connection offered by the foreign agent,

average delay of the connection offered by the foreign agent,

jitter of the connection offered by the foreign agent,

number of users served by the foreign agent,

throughput of the foreign agent,

load of the foreign agent, and

proportional load of the foreign agent compared to the other foreign agents in the system.